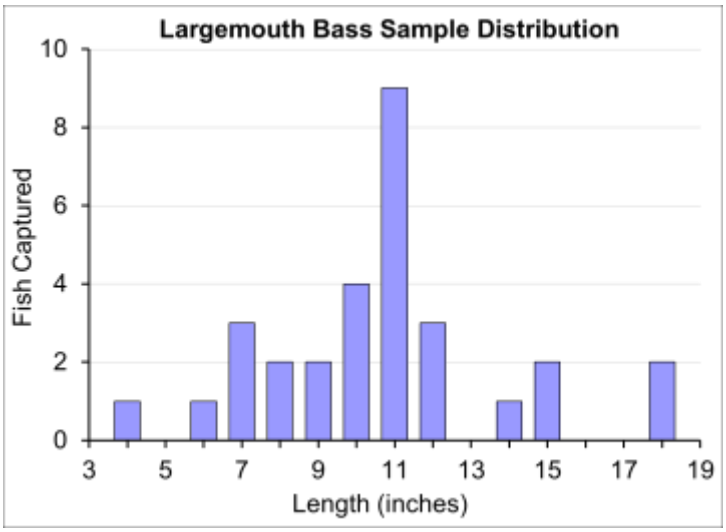
Wisconsin Department of Natural Resources
Fishery Information Sheet

LAKE: Chequamegon Waters Flowage **COUNTY:** Taylor **YEAR:** 2017 – 2018

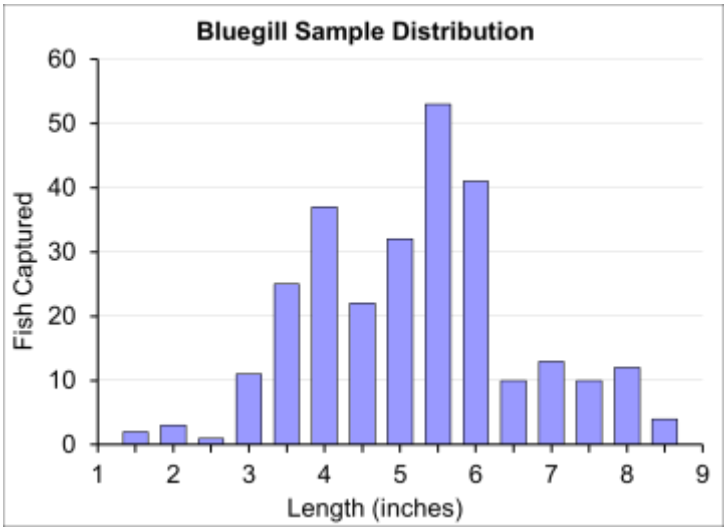
Chequamegon Waters Flowage, locally called Miller Dam, is a 2,714-acre impoundment on the Yellow River and Taylor County's largest waterbody. Maximum and average depths are 22 and 5 feet, and 39% of the reservoir is under 3 feet deep. Bottom materials nearshore are 10% gravel, 10% sand, and 80% muck. The fine particles underlying extensive portions of the reservoir provide substrate for larval insects (important food for many fish species), wild rice, and 27 other aquatic plant species. Low water clarity limits rooted aquatic plant growth to depths less than 6 feet. This nutrient-rich flowage is very fertile and biologically productive. The Miller Dam Lake Association operates a lake aerator to maintain an ice-free area to reduce the risk and severity of fish mortality from oxygen depletion. Fishing pressure and harvest are perceived to be moderately high in the open-water and ice-covered seasons. In late spring 2018 when water temperature was 72°F, WDNR assessed bass and bluegill populations by electrofishing. Our fall 2017 fyke netting survey targeted black crappies.



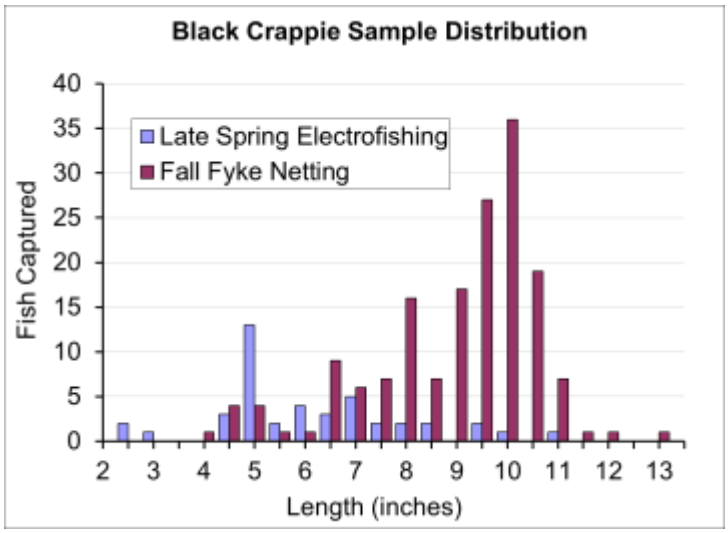
Largemouth Bass

We captured 30 largemouth bass ranging 4.3 – 18.6" and averaging 11.2" long. Like in spring 2010 and 2014, our capture rates of 5.0 bass ≥ 8" per mile and 11 per hour fell far short of our goal for moderate bass abundance (40-60 bass/hour), though poor visibility in dark-stained, turbid water hampered our electrofishing capture efficiency somewhat. Bass size structure was disappointing, especially in such a fertile and productive flowage. Among 25 bass 8" or longer, 20% were legal size ≥ 14", but the population did not meet our goal to have 2 – 4% at least 20", like it did in spring 2010.

Bluegill



Electrofishing yielded a sample of 276 bluegills, ranging 1.5 – 8.8" and averaging 5.4" long. Our capture rates of 135 bluegills ≥ 3" per mile and 265 per hour exceeded our objective for moderate population abundance (75 – 150 per hour). With only 6% of bluegills 8" or longer, the population did not meet our goals to have 15 – 20% of that size and 1 – 2% at least 10". Past samples from early spring and fall netting surveys often included higher proportions of the largest bluegills that went undetected in electrofishing surveys. Our 2018 sample portrayed a population with lower abundance and better size distribution, compared to spring 2014 when electrofishing captured 366 bluegills per hour, and only 1% was 8" or longer. A reduced limit of 5 bluegills among 15 panfish in May and June may help to improve bluegill size structure. The experimental harvest restriction in effect since April 2016 will be evaluated before its sunset date in 2026.

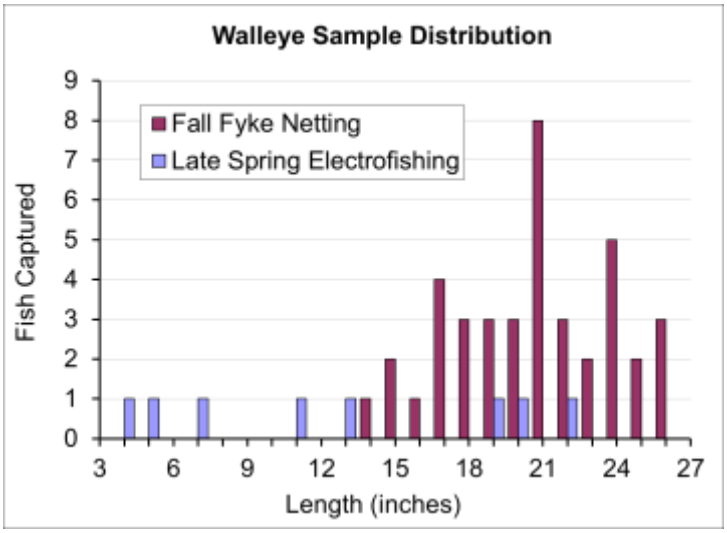


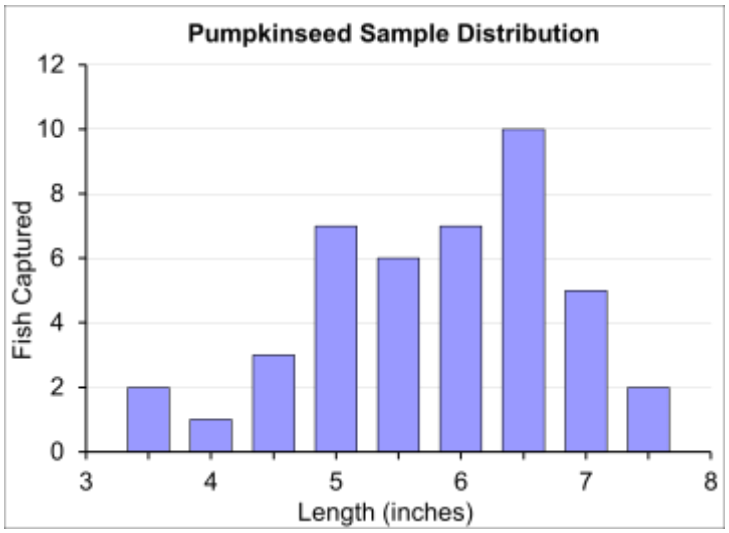
Black Crappie

Our late spring electrofishing and fall fyke netting surveys gave widely different portrayals of the black crappie population's abundance and size structure. Electrofishing captured 43 crappies, ranging 2.7 – 11.2" and averaging 6.3", at rates of 19 fish ≥ 5" per mile and 36 per hour with only 5% at least 10" long. In contrast, fyke nets captured 165 crappies at a rate of 6.7 fish ≥ 5" per net-night. Our netting catch rate decreased 63% from fall 2013, falling below the objective range chosen to represent the desired moderate population abundance (10 – 20 per net-night). Crappies in fyke nets ranged 4.2 – 13.0" and averaged 9.1" long. Forty-one percent were 10" or longer, and 1% was at least 12", meeting our goal for a population with 30 – 50% at least 10" long. At reduced abundance, crappie size structure improved since fall 2013 when 23% were 10" and longer. Ring counts on ear bones extracted from 21 crappies 9.0 – 10.7" revealed that crappies needed 6 years to reach 9.5" (n=15; range 9.0-10.6"), compared to the regional average of 10.1 inches at age 6. Age-7 crappies and age-8 crappies both averaged 10.5" long, contrasted with northern Wisconsin averages of 10.7 and 11.3" at those ages. Despite their slower-than-average growth, crappies live long enough to eventually attain the sizes that anglers like to keep. The seasonal harvest restriction on panfish may increase the population's share of 12-inch crappies.

Walleye

Our non-targeted bycatch of 40 walleyes 14.8 – 26.9" in fall fyke nets and 8 walleyes 4.8 – 22.5" by electrofishing suggests that at least some of the 16,184 walleyes purchased by the Miller Dam Lake Association and annually stocked as 6- to 9-inch fingerlings in 2007 – 2017 are surviving to help control panfish abundance and provide the bonus fishing opportunity that stakeholders wanted. Early spring netting and electrofishing surveys would yield an estimate of walleye population density to better evaluate this stocking strategy and its effects on the fish community.



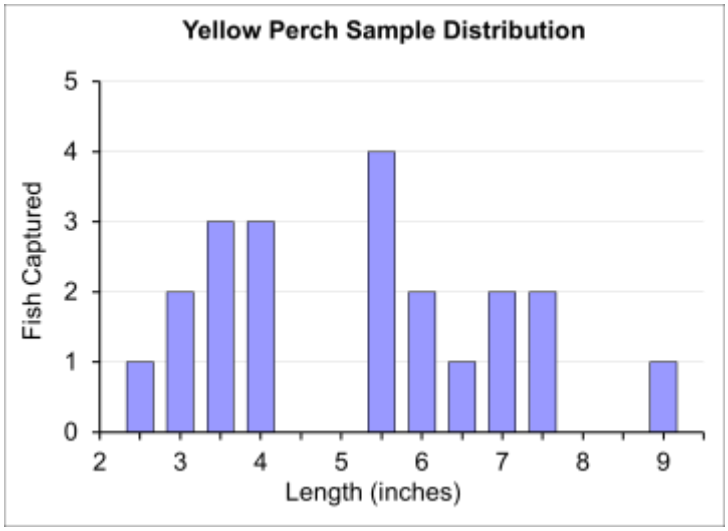


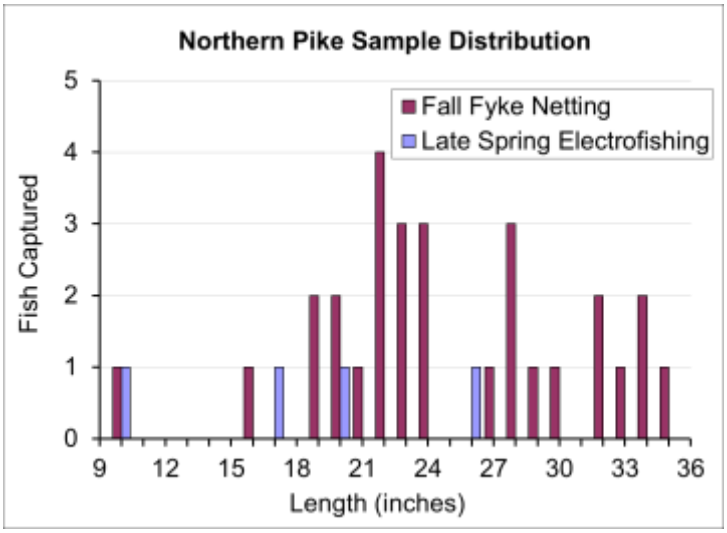
Pumpkinseed

A pumpkinseed population in moderate abundance with decent size distribution offers anglers additional harvest opportunity in May and June when they may keep 15 panfish daily, but only 5 of any one species. Electrofishing captured 43 pumpkinseeds at rates of 22 per mile and 42 per hour. They ranged 3.5 – 7.8", averaged 6.0 inches, and 16% were 7" or longer. Pumpkinseeds were on average 0.6 inch longer than bluegills in our samples.

Yellow Perch

As the preferred food of pike, bass, and walleye, perch play a major role in structuring the fish community. But, perch population status is poorly represented in late spring electrofishing surveys. Electrofishing captured 21 perch that ranged 2.6 – 9" and averaged 5.4" long. We caught perch ≥ 5" at rates of 6.0 per mile or 12 per hour, compared to 14 per mile and 34 per hour in late spring 2014. We suspect that much of the difference stems from sampling variability, rather than a real decrease in perch abundance. Perch of all sizes should continue to serve as the principal food of sport fish with higher importance to Miller Dam anglers.





Northern Pike

Unlike the disappointing size of pike in most waters nearby, Miller Dam's population produces large fish. Pike 42" or longer have been captured by anglers and in surveys more than just occasionally. Fyke netting immediately after ice-out best represents pike abundance and size structure, but our incidental catch of 29 pike by fall netting and 4 by electrofishing surveys shows a self-sustaining population with wide range of sizes (10.7 – 35.0") and age classes. Their average length was 25.4" in fyke nets and 24.6" in both samples combined.

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